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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

WOODS, ERIC V

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/781,963

Applicant(s)

IDE, TAKASHI

Examiner

Eric V Woods

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Specification***

1. The abstract of the disclosure is objected to because it is not descriptive and does not describe the invention as taught in the specification. The invention is directed to spreadsheets and manipulation of data sets for that application. The abstract conveys that applicant's invention is directed to applications such as image processing, which it clearly is not. Correction is required. See MPEP § 608.01(b). Examiner believes that the application has misclassified, and will move to so correct the problem if the case goes to issue (the correct classification is believed to be class 715, subclass 503 – spreadsheets – or similar).
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
3. The following title is suggested: Spreadsheet data manipulation of two-dimensional data structures with recording capability and activation means.
4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Continued Examination Under 37 CFR 1.114

5. A request for continued examination (RCE) under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee

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set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 15 September 2004 has been entered.

Response to Arguments

6. Applicant's arguments, see Applicant's Arguments with respect to the final rejection, hereafter termed 'Arguments', filed with the RCE on 15 September 2004, with respect to the rejection(s) of claim(s) 1-13 under 35 U.S.C. 102(e) have been fully considered and are persuasive in light of the amendment accompanying the RCE. However, the withdrawal of this rejection under 35 U.S.C. 102(e) is made with the caveat that it is in light of the amendment only, and that as such if applicant amends the claims again, this rejection may be re-introduced by examiner if new amendments change the scope of the claims such that the original rejection is found to valid again. Therefore, the rejection has been withdrawn. However, upon further consideration and necessitated by applicant's amendments, new ground(s) of rejection are made in view of Adler and Jennings as set forth below.

7. Applicant is reminded, however, that alleging that Adler is incapable of selecting all cells, simply because Adler is silent on the subject, is not a valid response to Examiner's position. It is well known in the art that users can select and / or highlight desired cells – applicant admits this (Arguments pg. 7, the main paragraph in the middle of the page). Adler clearly states that his invention is designed to run on a variety of operating systems (3:45-55), which would obviously include Microsoft™ Windows® variants, as they hold the vast market share in the corporate business space for

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operating systems. Under a Windows® operating environment and all modern operating systems, it is well-known that native applications (for example, WordPad®, which is included with Windows® 98 and later versions) have a "select all" feature, accessible from the Edit menu, that can be activated with a keyboard shortcut 'Ctrl-A'. All modern applications are known to implement similar functionality, so although Adler is silent on the issue, it is a virtual certainty that Adler would possess such functionality.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adler et al (US 6,138,130)('Adler') in view of and in light of Jennings et al (Jennings, Roger, et al. "Special Edition, Using Access™ 95". Copyright 1995). Clearly, the method and apparatus claims are comparable and have the exact same wording. The computer-related product / computer-readable medium is taught by Adler, clearly, for example claim 22 (col. 31, lines 30-40), so that is a trivially obvious variant and will not be separately addressed. As such, the rejection below is equally valid for claims 1, 5, and 9 without further comment or modification for the reasons set forth above. Firstly, the rejection under Adler will be repeated, and then the additional limitations set forth in the amendment introduced with the RCE will be addressed in light of the second reference and applicant's Arguments.

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10. As to claims 1, 5, and 9,

A two-dimensional data processing apparatus comprising:

- Operating means for inputting two-dimensional data, and for outputting one piece of two-dimensional data obtained after an entirety of rows or columns of said input two-dimensional data is subjected selectively to one of a plurality of predefined operations, the one piece of output two-dimensional data having a different configuration from the input two-dimensional data;
- Designating means for designating an operation type which specifies said operation by said operating means, and an input target and an output target of said operation;
- Recording means for recording at least one set of operation contents in the designated order of said operation contents, with the operation type, input target and output target designated through said designating means being one set of operation contents; and
- Activating means for sequentially reading out said operation contents recorded by said recording means, and for selectively activating one operation for said operating means based on the operation type, input target and output target of said operation contents.

A. Restatement of art rejection based on Adler from earlier Final Rejection

Re claim 1, Adler discloses a two-dimensional data processing comprising operating means for inputting two-dimensional data, and for outputting one piece of two-dimensional data obtained after an entirety of rows or columns of input two-dimensional data is subjected selectively to one of a plurality of predefined operations (col. 1, line 45 to col. 2, line 2); designating means for designating an operation type which specifies operation by operating means, and an input target and an output target of operation

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(col. 3, line 60 to col. 6, line 25); recording means for recording at least one set of operation contents in the designated order of operation contents, with the operation type, input target and output target designated through designating means being one set operation contents (col. 6. lines 12-25); and activating means for sequentially reading out operation contents recorded by recording means, and for selectively activating one operation for operating means based on the operation type, input target and output target of operation contents (col. 6. line 12 to col. 10, line 67). In other words, Adler teaches an electronic spreadsheet in two-dimensional format wherein the user has the flexibility to customize the spreadsheet.

The data associated with a cell (row and column) is called an object. The objects can be manipulated in that the user can input and manipulate data. The user is able to program new types of objects into the interpreter, define the operations that can be performed on these objects and then immediately utilize these objects in the context of the electronic spreadsheet. The electronic spreadsheet allows the user to perform functions, to create new objects, and to alter the basic operations permissible on those objects. In that the computer processing associates each object and each formula with each cell and correspondingly evaluates each formula and assigns to the operators) in each formula plurality of operative expressions selected in accordance with the object type of the changes and re-associating the result of each formula with each cell containing each formula operating on the at least one object whose value has changed. In addition, the computer processing stores each objects and each formula associated with each cell in a storage device (i.e. recording means).

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B. Added Limitation of 'Entirety of rows or columns'

See paragraph (7) above, where this point is addressed at length, but it is well known in the art to enable the user to be able to select all data fields, and also in the art of databases, it is well known in the art to allow the user to perform operations on the entire data set, e.g. sort, merge, join, and typical logical and SQL queries. The details herein will not be enumerated, as these are all well known to one of ordinary skill in the art, and it would have been obvious to modify the system of Adler to perform said limitations if it already did not do so, in light of the discussion in (7) above.

C. Added Limitation of 'One piece of output two-dimensional data ... having different configuration ... from the input two-dimensional data'

Firstly, in the Background and Related Art sections of applicant's specification, applicant clearly admits that relational databases are known in the art and that utilities and functionality are known such that data from the one can be switched between the two in an interchangeable manner, regardless of ease of use issues involved therein. For all practical purposes, a spreadsheet is merely a view of a relational database, and this view is backed by applicant's background.

Microsoft Access is a database program providing the user with views of data fields stored therein. Firstly, comparable background will be established. Adler 21:1-30 clearly establishes that dataflow relationships exist between interrelated elements, and 2:2-30 clearly establishes that the product can be used with spreadsheets capable of displaying multidimensional, interrelated data sets. *Prima facie* based on 3:52-67 in Adler, which establishes that his invention can process data taken from electronic

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databases, and can also manipulate entire data sets inserted in one cell, this clearly establishes that the spreadsheet functionality is inexorably linked to that of a database and that, for this kind of purpose, the two are interchangeable. Further, relational databases (RDBMS) and SQL (structured query language) are well known in the art of databases, and are accessible / can be created / or are part of Microsoft Access, that is, the MS Access system utilizes such queries (Jennings pgs. 832-837 for example). Again, this clearly establishes that a multi-dimensional database can be coupled into and with a spreadsheet such that a two-dimensional view of a database and a spreadsheet can be comparable and interchangeable. Two-dimensional data in a spreadsheet can easily be transferred into a database and vice versa, as established by Adler, Jennings, and as is well known in the art.

Jennings very clearly teaches that (pgs. 286-290) databases have many kinds of operators, and Query results can obviously be two-dimensional (see pgs. 308-313, particularly Fig. 9.8 on pg. 311 where a two-dimensional query result is entered). Secondly, SQL join operators are known (Jennings 318-328), wherein multicolumn and multi-table joins (pgs. 325-328) are further well known. Given that multi-table join operators are well-known, multiple two dimensional data sets (tables, spreadsheets, et cetera) can be operated upon simultaneously, as can, for example, multiple columns (pg. 325), which therefore establishes (based on the logic in (7)) that it is well known and obvious to operate a join, query, merge, sort, relational operators (pgs. 880-881), et cetera, upon two-dimensional data sets (tables and spreadsheets for example) in their

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entirety using, for instance, the Select All option known to come standard with Microsoft® products as set forth in (7).

D. Motivation / Combination

Therefore, It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the spreadsheet of Adler with the database and queries of Jennings as set forth above in numerous paragraphs, given that (pgs. 221-249) Jennings teaches the import of data from multiple columns of a spreadsheet specifically (pgs. 245-246) and the importing of data from a spreadsheet generally (pgs. 221-249), and Adler clearly teaches the use of spreadsheets and establishes that spreadsheets can import and obtain data from databases as set forth above.

E. Additional Responses to Arguments with Respect to These Claims, and the Rejection under 35 U.S.C. 103(a)

Applicant's comments in Arguments (pg. 8, second and third paragraphs) are moot in view of the new grounds of rejections, as the secondary reference is brought in to address these specific limitations.

11. Re claims 2, 6, and 10, Adler teaches recording means operation contents as two-dimensional data (col. 2, lines 3-20; col. 6, line 12 to col. 10, line 67). Alder teaches recording means for the electronic spreadsheet is two-dimensional. Only the primary reference is utilized; as such, no separate motivation or combination is required, and that of the parent claim is hereby incorporated by reference.

12. Re claims 3, 7, and 11, Adler teaches designating the input target and the output target of the specified operation at an execution time of the specified operation and

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selectively activating the specified operation based on the input target and the output target designated, when a specific identifier is included in operation contents recorded by recording (col. 5, line 34 to col. 6, line 42). In other words, Adler teaches the computer-based system, wherein the user identifies a user-selected cell through the input means and enters at least one character into the text edit field through the input means and a memory storage unit. Furthermore, the computer-based system can provide unique benefits by functionally positioning the scripting language behind the spreadsheet. Hence the user may not only define objects but may also alter the basic operations permitted by the spreadsheet on those objects. Only the primary reference is utilized; as such, no separate motivation or combination is required, and that of the parent claim is hereby incorporated by reference.

13. Re claims 4, 8, and 12, Adler discloses the input target and the output target of operation by operating means are specified by another piece of two-dimensional data (col. 5, Lines 1-51). The computer-based system of Adler is linked through a computer network that permits the computer systems to exchange data (i.e. means are specified by another piece of two-dimensional data). Only the primary reference is utilized; as such, no separate motivation or combination is required, and that of the parent claim is hereby incorporated by reference.

14. Re claim 13, Adler discloses a two-dimensional data processing method comprising inputting two-dimensional data, and outputting one piece of two-dimensional data obtained after an entirety of rows or columns of input two-dimensional data is subjected to one of a plurality of predefined operations (col. 24, line 32 to col. 25, line

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44). In other words, Adler teaches the matrix including columns and rows being manipulated. Numerous cells are manipulated for a particular calculation thus will change the information in the necessary rows or columns.

15. Claims 2 – 4, 6 – 8, and 10 – 13 have **not** been amended, and as such, the rejections have not been changed, except to make them under 35 U.S.C. 103(a) instead 35 U.S.C. 102(e); applicant has not specifically addressed these in other than a cursory fashion in the previous responses to examiner's office actions.

15. Re newly introduced claims 14 and 15, in paragraph (10), subsections A-E above, the required details to perform this rejection are taught, specifically in that Adler teaches the use of multiple, interrelated spreadsheets (the so-claimed pieces of two-dimensional data) wherein it is known that the entirety of each can be selected, and it is further known in Adler that certain section(s) of the input data set(s) or spreadsheet(s) can be selected at will (e.g. the "entirety" wording is irrelevant, as discussed in claim 1 – user can selectively choose to process the entirety or a subset thereof at will). Further, SQL operators and relational operators (e.g. join operators, as cited in (10), clearly include join operators, which pull from multiple tables, which are clearly two-dimensional data sets, and a join operator and SQL queries are clearly 'predefined operations' or combinations thereof. The claims recite 'a plurality of predefined operations' of which a combination thereof clearly meets the definition of 'a plurality'. Clearly, the output results of the query (see pgs. 308-313, particularly Fig. 9.8 on pg. 311 where a two-dimensional query result is entered) are two-dimensional, and only represent one output piece of data. Finally, such a result, unless done with an 'ALL' command, having any

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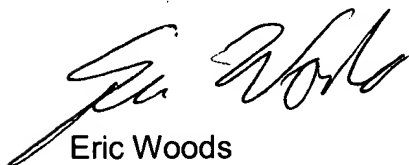
kind of join or search criteria put in, will *prima facie* be (as is well known in the art, as is trivially obvious to one of ordinary skill in the art, et cetera) different than the input data set(s) according to the operations so applied to the data set(s). Accordingly, the motivation and combination of claim 1 is adopted herein by reference, as these claims are only broader version of claim 1 and as such the same motivation and combination cited in paragraph (10), section D, above, hold.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric V Woods whose telephone number is 703-305-0263. The examiner can normally be reached on M-F 7:30-5:00 alternate Fridays off.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Eric Woods

February 2, 2005



JEFFERY BRIER
PRIMARY EXAMINER